

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The specification has been amended to provide cross-referencing to the International Application.

IN THE CLAIMS:

The claims have been amended as follows:

3. (Amended) An electromagnetic rotary actuator according to [any of claims 1-2] claims 1, characterized in that at least three pole teeth carry windings, all windings being connected to one single voltage source and the pole teeth carrying windings being located centrally, preferably around a central pole tooth.

5. (Amended) an electromagnetic rotary actuator according to [any of claims 1-4] claim 1, characterized in that the actuator comprises exactly three pole teeth and the pole teeth are arranged within an angle, taken from the axis, of at most somewhat more than a third of a full turn, in particular within an angles smaller than 130°.

6. (Amended) An electromagnetic rotary actuator according to [any of claims 1-5] claim 1, characterized in that the actuator comprises exactly five pole teeth and the pole teeth are arranged within an angle, taken from the axis, of at most somewhat more than half a full turn, in particular within an angle smaller than 225°.

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7. (Amended) An electromagnetic rotary actuator according to [any of claims 1-6] claim 1, characterized in that the rotor and stator poles have the same pitch.

8. (Amended) An electromagnetic rotary actuator according to [any of claims 1-7] claim 1, characterized in that an angular sector extending between the two outermost ends of the pole teeth portions facing the air gap is longer than the sum of the peak to peak movement of the rotor and an the angular sector extending between the two outermost ends of the rotor magnet or magnets facing the air gap.

9. (Amended) An electromagnetic rotary actuator according to [any of claims 1-8] claim 1, characterized in that an the angular sector between the two outermost ends of the pole teeth portions facing the air gap is substantially equal to the sum of the peak to peak movement of the rotor and an the angular sector extending between the two outermost ends of the rotor magnet or magnets facing the air gap.

10. (Amended) An electromagnetic rotary actuator according to [any of claims 1-9] claim 1, characterized in that an angular sector extending between the two ends of a stator pole tooth facing the air gap is longer than the sum of the peak to peak, movement of the rotor and an angular sector extending between an end

of a rotor magnet part facing the air gap and the nearest end of an adjacent rotor magnet facing the air gap.

11. (Amended) An electromagnetic rotary actuator according to [any one of claims 1-10] claim 1, characterized in that the normally cylindrical surface angular sector of at least one stator pole part facing the air gap to the rotor magnet pole parts have an adjusted shape to reduce the cogging torque of the actuator.

13. (Amended) An electromagnetic rotary actuator according to [any one of claims 1-12] claim 1, characterized in that each of the stator poles carrying winding coils has a reduced height in the axial direction at places of the stator pole where the winding is located, thereby permitting a portion of the stator pole located at the airgap and at a radially inner surface of the stator pole to be longer in the axial direction than a portion of stator pole located inside the stator pole winding.

14. (Amended) An electromagnetic rotary according to [any one of claims 1-13] claim 1, characterized by an electronic driver circuit connected to the at least one winding and comprising resistance changing means to increase a resistance in series with the actuator winding when a longer electric time constant is advantageous or required and to reduce the resistance in series with the actuator winding when a short electric time

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constant is advantageous or required.

INVESTIGATION